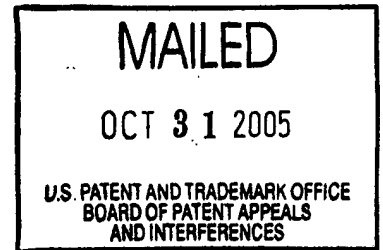UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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<u>Ex parte</u> BYUNG KEUN LIM
and YOUNG SIK YOUN

_____

Appeal No. 2005-1857
Application No. 09/475,186

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ON BRIEF

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│  U.S. PATENT AND TRADEMARK OFFICE │
│     BOARD OF PATENT APPEALS │
│       AND INTERFERENCES     │
└─────────────────────────────┘
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·Before DIXON, GROSS, and SAADAT, <u>Administrative Patent Judges</u>.

SAADAT, <u>Administrative Patent Judge</u>.

<u>DECISION ON APPEAL</u>

This is a decision on appeal from the Examiner's final rejection of claims 1-20.

We reverse.

<u>BACKGROUND</u>

Appellants' invention relates generally to a communication system for controlling a packet data service in a mobile communication network. In particular, the invention relates to

controlling the transfer of medium access control (MAC) layer

state information and radio resource control (RRC) information of

an active terminal when the active terminal moves from a first

radio network controller (RNC) to a second RNC.

An understanding of the invention can be derived from a

reading of exemplary independent Claim 1, which is reproduced as

follows:

> 1. A system for controlling a packet data service in a
> mobile communication network, comprising:
>
> a plurality of radio network controllers, wherein
> each of said radio network controllers assigns a radio
> channel to a packet data service active terminal and
> controls a data service path for said active terminal;
> and
>
> a location management unit that manages service
> state information, location information and connection
> information of said active terminal;
>
> wherein, when said active terminal moves from a
> first one of said radio network controllers to a second
> one of said radio network controllers in a suspended
> state or a dormant state, medium access control layer
> state information and radio resource control
> information of said active terminal are maintained
> between said first and second radio network controllers
> under control of said location management unit.

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The Examiner relies on the following prior art references:

Wright et al. (Wright)   6,240,083   May 29, 2001

Wallentin et al. (Wallentin)   6,292,667   Sep. 18, 2001

Claims 1-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wallentin in view of Wright.[1]

Rather than reiterate the opposing arguments, reference is made to Appellants' brief (filed June 28, 2004) and reply brief (filed December 1, 2004) and the Examiner's answer (mailed October 1, 2004) for their respective positions. Only those arguments actually made by Appellants in the briefs have been considered in this decision. Arguments which Appellants could have made but chose not to make have not been considered (37 CFR § 41.37(c)(1)(vii)).

OPINION

Regarding claim 1, Appellants initially argue (brief, page 7) that Wallentin's inter-RNC transport link (32) is not a main body of transportation and is thus not a location management

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[1] The Examiner has withdrawn the rejection of claims 17 and 18 under the first paragraph of 35 U.S.C. § 112 in the answer.

unit. We do not find this persuasive because Wallentin teaches
(Figure 1; column 6, lines 55-67) that transport link 32 handles
handovers (i.e. the transfer of active terminal information
between a first and second RNC) and that the link 32 can go
through a core network, which is a location management unit.

Appellants further argue (brief, page 7) that Wallentin does
not teach forward communication with a mobile station during an
idle state when the mobile station moves from one area to another
in an idle state, but merely receives a location update or
comparable message to a home location register (and associated
visitor location register) that provides for location
registration. We do not agree with Appellants' position for two
reasons. First, the language regarding "forward communication"
is not recited in claim 1. Second, the Examiner has pointed to
passages in Wallentin (column 12, lines 37-43 and column 4, lines
48-52) that do teach forward communication via paging while the
mobile station (i.e. active terminal) is idle.

In considering the limitation of maintaining medium access
control (MAC) layer state information and radio resource control
(RRC) information between first and second RNCs, the Examiner
states (answer, page 4) that Wallentin does not teach maintaining

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MAC layer state information and RRC information between first and second RNCs. The Examiner later states (answer, page 12) that Wallentin "alludes to such concepts of MAC (Medium Access Control) layer and radio resource control information (though does not explicitly state these terms)" and points to various passages within Wallentin (column 2, lines 38-47; column 4, lines 1-5; column 4, lines 24-27; column 4, lines 53-58; and column 12, lines 42-52) for support. However, the Examiner (answer, page 4) further relies on Wright (column 6, lines 34-50; column 28, lines 5-8; and column 31, lines 25-65) to buttress the teaching of MAC layer state information and RRC information. Additionally, the Examiner (answer, page 15) points to other passages in Wright (column 4, lines 45-56; column 6, lines 51-67; and column 6, lines 25-33) as indications of MAC layer functions.

Appellants argue (brief, page 7) that Wallentin does not teach MAC layer state information and RRC information of a terminal or a point-to-point protocol (PPP) connection between a new RNC and an active terminal, but rather teaches providing a location registration (column 2, lines 1-16). Appellants further

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argue (brief, page 11) that Wright does not discuss operations occurring during an idle state or MAC operations and that Wright discusses a subscriber MAC, which is not part of a core network in Wallentin.

Although the MAC layer state information and RRC functions are considered in the references, we agree with Appellants' position that Wallentin and Wright do not teach nor suggest maintaining MAC layer state information and radio resource control (RRC) information between first and second RNCs. While Wallentin (column 1, lines 40-60 and column 6, lines 55-67) teaches handoff between a first and second RNC, there is nothing in the reference to teach MAC structure or performing the handoff when the active terminal is in a particular MAC state. With regards to Wright, although various MAC states are disclosed, there is no specific teaching of maintaining information between first and second RNCs while the subscriber (active terminal) is in a suspended or dormant state. The fact that MAC layer state information may be present is not sufficient to meet the claim limitation.

Thus, the Examiner has failed to provide a _prima facie_ case
of obviousness since the teaching related to maintaining MAC
layer state information and RRC information when an active
terminal in a suspended or dormant state moves from a first RNC
to a second RNC is absent in the applied prior art. We note that
claim 8 includes limitations similar to those in claim 1 related
to maintaining the MAC layer state information between the old
and the new radio network controllers, which are absent in the
prior art as discussed above. Accordingly, the 35 U.S.C. § 103
rejection of independent claims 1 and 8 as well as claims 2-7, 9
and 16-20, dependent thereon, is not sustained.

Turning next to claim 10, we note that Appellants' primary
argument (brief, page 13) is that Wallentin in view of Wright
does not teach or suggest handoff operations in a suspended or
dormant state or means to transmit MAC state information and RRC
information of the active terminal. As stated above with respect
to claim 1, we agree with Appellants' position that Wallentin and
Wright provide no teaching or suggestion for maintaining MAC
state layer information and RRC information when an active

terminal in a suspended or dormant state moves between a first

RNC and a second RNC.

As argued by Appellants (reply brief, page 5), the

"moveover" in Wallentin applies to mobile station processing

while connected to the caller in the core network. In fact,

although Wallentin teaches handoff operations between first and

second RNCs (column 1, lines 40-60 and column 6, lines 55-67),

there is no teaching or suggestion to perform the handoff

operations in the required dormant or active state as claimed and

Wright's teachings on subscriber MAC layers do not remedy this

deficiency. Acordingly, the 35 U.S.C. § 103 rejection of claim

10 and claims 11-15, dependent thereon, cannot be sustained.

<div align="center">CONCLUSION</div>

In view of the foregoing, the decision of the Examiner

rejecting claims 1-20 under 35 U.S.C. § 103(a) is reversed.

REVERSED

JOSEPH L. DIXON   )
Administrative Patent Judge   )
)
)
)
ANITA PELLMAN GROSS   ) BOARD OF PATENT
Administrative Patent Judge   )   APPEALS
)   AND
) INTERFERENCES
)
MAHSHID D. SAADAT   )
Administrative Patent Judge   )

MDS/ki/dnm/kis

Appeal No. 2005-1857
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